public class CreditCard {

// Instance variables

private String cardHolder;

private String cardNumber;

private double balance;

private double creditLimit;

// Constructor to initialize the variables

public CreditCard(String cardHolder, String cardNumber, double creditLimit) {

this.cardHolder = cardHolder;

this.cardNumber = cardNumber;

this.balance = 0.0; // Balance starts at 0

this.creditLimit = creditLimit;

}

// Getter and Setter for balance

public double getBalance() {

return balance;

}

public void setBalance(double balance) {

this.balance = balance;

}

// Getter and Setter for credit limit

public double getCreditLimit() {

return creditLimit;

}

// Method to update the credit limit

public void updateCreditLimit(double newLimit) {

if (newLimit >= balance) {

this.creditLimit = newLimit;

System.out.println("Credit limit updated to: $" + newLimit);

} else {

System.out.println("New limit cannot be less than the current balance.");

}

}

// Method to charge a purchase to the card

public void makePurchase(double amount) {

if (amount <= (creditLimit - balance)) {

balance += amount;

System.out.println("Purchase of $" + amount + " successful. New balance: $" + balance);

} else {

System.out.println("Insufficient credit limit for the purchase.");

}

}

// Method to make a payment

public void makePayment(double amount) {

if (amount <= balance) {

balance -= amount;

System.out.println("Payment of $" + amount + " successful. New balance: $" + balance);

} else {

System.out.println("Payment amount exceeds balance.");

}

}

// Method to display the card details

public void displayCardDetails() {

System.out.println("Cardholder: " + cardHolder);

System.out.println("Card Number: " + cardNumber);

System.out.println("Balance: $" + balance);

System.out.println("Credit Limit: $" + creditLimit);

}

// Main method for testing

public static void main(String[] args) {

// Create a CreditCard object

CreditCard card = new CreditCard("John Doe", "1234-5678-9876-5432", 5000);

// Display initial card details

card.displayCardDetails();

// Attempt to update credit limit

card.updateCreditLimit(6000);

card.displayCardDetails();

// Attempt to update credit limit with an invalid limit (lower than balance)

card.updateCreditLimit(4000);

card.displayCardDetails();

}

}

**Explanation:**

1. **Instance Variables:**
   * cardHolder: The name of the cardholder.
   * cardNumber: The credit card number.
   * balance: The current balance on the credit card.
   * creditLimit: The maximum allowable balance on the credit card.
2. **Constructor:**
   * Initializes the cardHolder, cardNumber, and creditLimit. The balance is initialized to 0.0 by default.
3. **updateCreditLimit Method:**
   * Takes a newLimit as a parameter and checks if the new limit is greater than or equal to the current balance.
   * If valid, it updates the credit limit. Otherwise, it prints an error message.
4. **Other Methods:**
   * makePurchase: Allows charging a purchase if it doesn't exceed the available credit limit.
   * makePayment: Allows making a payment to reduce the balance.
   * displayCardDetails: Displays the details of the credit card.

**Example Output:**

Cardholder: John Doe

Card Number: 1234-5678-9876-5432

Balance: $0.0

Credit Limit: $5000.0

Credit limit updated to: $6000.0

Cardholder: John Doe

Card Number: 1234-5678-9876-5432

Balance: $0.0

Credit Limit: $6000.0

New limit cannot be less than the current balance.

Cardholder: John Doe

Card Number: 1234-5678-9876-5432

Balance: $0.0

Credit Limit: $6000.0